

REMARKS

Very thanks for Examination's suggestion and thanks for finding some citations about the present invention, thereby, the applicant may know more information about the invention. This case has been carefully reviewed and analyzed in view of the office action. All details of the reference prior arts are fully considered and compared with the present invention.

Responsive to the objections and rejections made of the Examiner in office action. We have amended the specification, claims and abstracts. All the errors disclosed in that office action has been corrected according to the Examiner's indications disclosed in the official action.

Indeed the citations disclose some features of the present invention, and the applicant agrees with these viewpoints, however applicant discovers that some main features of the present invention is not disclosed in the citation which can form the novelty and inventive step of the present invention.

To make the present invention novel with respect to the citations, the applicant decide to cancel Claims 1 to 7, without prejudice or disclaimer of the subject matter thereof, and add new claims 8 to 14. The added new claim 8 is based on the original claim 1 and the features of Fig. 3 of the present invention. The new claim 9, 10, 11, 12, 13 and 14 add features same as the original claim 2, 3, 4, 5, 6, and 7, respectively, to the new claims 8. Thereby, it is assured that the new claims are based on the original claim and specification and thus no new matter is added. The relation of the new claims with respect to the original claims are shown in the following.

Claim 1-7 (Cancelled)

Claim 8. (New) 1. An engine with an auxiliary airflow
booster auxiliary airflow booster of an engine, comprising:
a cylinder 10 having a combustion chamber; a piston 17

being installed in the combustion chamber:

an air inlet head 11 having an air inlet gate 110 and being formed at an upper inlet side of the piston; the air inlet head 11 being assembled with an air inlet tube 111 for inputting fresh air; the air inlet gate 110 being assembled with an air inlet 13, a spring 14, and a camshaft 15a;

an exhausting head 12 having an exhausting gate 120 and being formed at an upper outlet side of the piston 17; an exhausting tube 19 being assembled to the exhausting head for exhausting waste gas; the exhausting gate 120 being assembled with an air output gate 16, a spring 14 and a camshaft, wherein input air is mixed with fuel in the combustion chamber and then burns, the air inlet gate 13 is opened, and the air outlet gate 16 is closed; when waste gas is exhausted, the air inlet gate 13 is closed and the exhausting gate 16 is opened;

an exhausting tube 19 connected to the exhausting head 12;

an auxiliary airflow booster installed to the exhausting tube 19 at an exhausting gate 120 of the exhausting head 12; the auxiliary airflow booster being a hollow body 20; an inner wall of the auxiliary airflow booster being formed with a narrowing portion which comprises two opposite tapered surfaces so as to have a front via hole 22 and a rear via hole 23; the front via hole 22 ~~having~~ ~~has~~ a front tapered portion 220 and the rear via hole 23 ~~having~~ ~~has~~ a rear tapered portion 230; an inner diameter of the front via hole 22 being smaller than the inner diameter of the rear via hole 23; namely, the narrow portions of the front tapered portion 220 and rear tapered portion 230 ~~being~~ ~~are~~ connected; since the inner diameter of the rear via hole 23 being larger than the inner diameter of the front via hole 22, the rear via hole 23 expanding the diameter of the body; by above structure, the

exhausting speed of waste gas is increased so that more fresh air is sucked into the cylinder.

Claim 9. (New) The engine with an auxiliary airflow booster
~~auxiliary airflow booster of an engine~~ as claimed in claim 8 \pm , wherein the length of the front tapered portion 220 of the front via hole 22 is shorter than that of the ~~second~~ rear tapered portion of the rear via hole 23.

Claim 10. (New) The engine with an auxiliary airflow
~~booster auxiliary airflow booster of an engine~~ as claimed in claim 8 \pm , wherein the material of the body is selected from one of metals and ceramics.

Claim 11. (New) The engine with an auxiliary airflow
~~booster auxiliary airflow booster of an engine~~ as claimed in claim 8 \pm , wherein an auxiliary cover 26 covers the periphery of the body 20.

Claim 12. (New) The engine with an auxiliary airflow
~~booster auxiliary airflow booster of an engine~~ as claimed in claim 8 \pm , wherein a locking sheet 24 is formed at a front end of the body for locking the exhausting head 12 at the exhausting gate 120 of the cylinder 10, and a rear end thereof is installed with a connecting section 25 for engaging the exhausting tube 19.

Claim 13. (New) The engine with an auxiliary airflow
~~booster auxiliary airflow booster of an engine~~ as claimed in claim 8 \pm , wherein an inner wall of the exhausting gate 120 of the exhausting head 12 of a cylinder is formed with a narrowing portion 21 which comprises two opposite tapered surfaces so as to have a front via hole 22 and a rear via hole 23; the front via hole 22 has a front tapered portion 220 and the rear via hole 23 has a rear tapered portion 230.

Claim 14. (New) The engine with an auxiliary airflow booster ~~auxiliary airflow booster of an engine~~ as claimed in claim 8 +, wherein at least one ~~body~~ ~~bodies~~ is installed in the exhausting tube.

DISCUSSION ABOUT NOVELTY OF THE NEW CLAIMS

(A) From above list of the new claims, it is shown that the new claim 8 claims the whole features of Fig. 3 of the present invention.

In the original claim 1, see Fig. 3 of the present invention, only the features of elements 20, 19, 22, 220, 23, 230 are claims. In the claim 8, other elements, such as the "cylinder 10, the combustion chamber; the piston 17, the air inlet head 11, the air inlet gate 110; the air inlet tube 111, the air inlet 13, the spring 14, and the camshaft 15a, the exhausting head 12, the exhausting gate 120; the exhausting tube 19; the air output gate 16, the spring 14 and the camshaft" are also claimed.

However as comparing with the citations 3,657,878, JP 06-17646, (or other citations, such as USP 1794276, USP 4023365, USP 4361206, USP 4690245, USP 5174113), no structure like above mentioned structure is disclosed. For example, in citation USP 3657878, only the tube side is disclosed, the citation dose not disclose that the airflow booster can be used to an engine, even an engine with a structure illustrated in Fig. 3 of the present invention.

(B) Furthermore, in the new claim 11, "an auxiliary cover 26 covers the periphery of the body 20.", see Fig. 5 of the present invention, it illustrates the cover 26. In office action, the element 20 in Fig. 1 of the citation USP 3657878 is used to object the cover 26 in the original claim 4 of the present invention. However see Fig. 1 of the present invention, the element 20 is more similar to the tube 19 of Fig. 5 of the present invention. It is not similar the cover 26 in Fig. 5 of the present invention. Thus, the

feature in new claim 11 is novel.

(B) RESULT

Since in above discussion, it is apparent that no prior art has the features of the present invention, especially in new claim 8. Thus the news claims 9 to 14 are also novel. Furthermore, as we know that no other prior art has features of the present invention. Thus, the present invention is novel and inventive.

If there is any error in the specification, or claims, applicant requests and authorizes Examiner to amend the claims, specification and drawings of the present invention so that they can match the requirement of U. S. Patent. Attentions of Examiner to this matter are greatly appreciated.

It is now believed that the subject Patent Application has been placed in condition for allowance, and such action is respectively requested.

Respectfully submitted.

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